THE

BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCI.] THURSDAY, AUGUST 13, 1874. [No. 7.

Original Communications.

SURGICAL TREATMENT OF EMPYEMA.

By HENRY CLARKE, M.D., of Worcester.

Read before the Massachusetts Medical Society, June 3, 1874.

MR. PRESIDENT AND GENTLEMEN,—I ask your attention to a brief consideration of the Surgical Treatment of Empyema. The object of my communication is to call your attention to a very successful method of treatment, which has been, for a few years, extensively practised in Germany and, to a certain extent, in this country; but, so far as I can learn, its value is not, as yet, generally recognized. If I succeed by this paper in contributing something toward popularizing the proceedings here advocated, I shall accomplish my sole purpose.

The surgical treatment of pleuritic exudations is of the greatest antiquity, dating back to the School of Hippocrates, and puncture of the chest has been performed from that time to the present. The method employed by Hippocrates was that of opening the chest through one of the intercostal spaces, either by the knife or by actual cautery, keeping the wound open until the fluid had entirely escaped, and until there was no tendency to further effusion. If the opening had a tendency to close, it was prevented by the introduction of a metallic sound.

It is not, gentlemen, a cause for self laudation, to reflect that after a lapse of two thousand years, we come back to the practice of the Father of Medicine; but such is in fact the case, for the operation now advocated is essentially the same, with only slight modifications. And yet these little improvements in the treatment following the operation have rendered it one of the most life-saving of all the operative proceedings in the whole range of surgery. It is but another illustration of the importance of attention to little things which can alone ensure success in any critical case, either surgical or medical, a lesson which cannot be too often impressed upon our minds.

In the seventeenth and eighteenth centuries, the operation of paracentesis thoracis excited a good deal of attention, and the question of admitting or excluding air from the pleural cavity was warmly discussed, some advocating one proceeding, and some another. The success, however, of either method was so small, and the difficulty of making a positive diagnosis so great, that the operation was rarely performed, and was condemned by the best surgeons, except in extreme cases. The great discovery of Laennec, of diagnosticating diseases of the chest by physical exploration, put a new phase upon the subject. There was no longer so much difficulty in diagnosis to contend with, and Laennec pointed out the indications for the operation

in pleuritic effusions; but he says, "in empyema, it is seldom successful. I have frequently had recourse to it, but have never had any permanent success." Some years later, the subject was again agitated, and prolonged discussions were held in the Academy of Medicine in Paris, and also in other learned societies. Becker, of Berlin, Schuh and Skoda, of Vienna, wrote monographs and treatises on the treatment of pleuritic effusions, in which they adovcated thoracentesis. In England, but little attention was given to the subject. Up to the time of Trousseau's paper upon Empyema, read before the Academy of Medicine in Paris, in 1844, the operation was performed, mainly, as a means of relief when the symptoms were most urgent, and not often as a means of cure. Trousseau's method of operating was by puncture with an ordinary trocar, and then injecting a solution of iodine and iodide of potassium, whether the contained fluid was serous or purulent, and repeating this according to circumstances. In cases where the fluid was serous, he found the operation to be more successful; but with regard to those where it was purulent, he remarks, "even in these cases, the operation renders good service." Trousseau encountered great opposition, but his zeal and eloquence in advocating thoracentesis made a great and lasting impression upon the profession at large, and more especially upon his students, many of whom soon became his disciples. In England, the subject awakened interest, and led to the publication of a monograph, by Hamilton Roe, on Paracentesis of the Chest in Empyema and Inflammatory Hydrothorax. He simply tapped the chest with a trocar, whether the fluid was pus or serum. He took no pains to avoid the admission of air, and considered the result of his experience favorable. In this country, the surgical treatment of pleuritic exudations, as a curative means, received its great impulse from the labors of our own Bowditch. You are all familiar with his mode of operating and his able and zealous advocacy of his mode of tapping the chest without admitting air. But here, again, we had the same operation, both for purulent and non-purulent effusions. Large success has attended his method, both in his own experience and in that of others, where the fluid has been serous; but where it has been purulent, it has not been so successful, and, in my own experience and observation, recovery has been the exception. In some cases, the reaccumulated fluid finds its way into the bronchial tubes, and is there expectorated, and the patient may thus recover. In others, the matter burrows through the passage made by the trocar, and forms an external abscess, which either opens itself, or is opened by the knife. This I believe to be the most favorable result for the patient where he is simply tapped. Some cases of empyema recover after one or more tappings, where neither of the above accidents occur, but this result is not common. There have been, in nearly all periods in the history of medicine, some surgeons who have pursued a bolder method than that of Trousseau, Bowditch and others, and have opened the chest freely by an incision with the bistoury, where the contained fluid was pus.

Goodfellow and De Morgan, in the *Transactions of the Medico-Chirurgical Society*, vol xlii., report some successful cases, in which they made two openings, one between the sixth and seventh ribs, and the other lower down. They passed a piece of drainage tube of Chassaignac through these two openings, and then united the ends,

forming a permanent opening. Their example found but few followers in England, and a large proportion of the cases of empyema there, as well as in France and in this country, continued to be fatal. Not until the recent simultaneous works of Kussmaul and Bartels, in Germany, was the great improvement in the treatment of empyema established. They divided pleuritic effusions into two classes, the purulent and the non-purulent, and claimed for each an entirely different operation. In serous effusions, they simply punctured with a trocar, and removed the fluid by suction, after the method of Bowditch, but in purulent effusions they made free openings. They showed, by a number of observations, that by the latter method of operating, the purulent effusions are almost as amenable to treatment as the non-purulent. Their example was followed by others with like success.

Thus we see, gentlemen, by this bird's-eye view of the history of thoracentesis, that after two thousand years of experience and of prolonged discussion, concerning the expediency of the operation and the method of operating, we come back substantially, so far as relates to empyema, to the simple practice of Hippocrates; that is, to open freely with the knife, and keep the incision open so long as pus continues to collect. We also illustrate, by our success, the wisdom of one of his precepts, "*Ubi pus, evacua.*"

The question as to the appropriate time of operating in empyema is an important one. Shall we operate as soon as we have formed a positive diagnosis, or shall we wait until we are satisfied that the efforts of nature are evidently insufficient to effect a cure? We know that in a certain proportion of cases, recovery takes place. This may be in two ways; first, by absorption, and secondly, by spontaneous opening into the bronchial tubes, or through the outer integuments of the chest. When slightly purulent, the fluid may be entirely absorbed, and even when the pus is quite thick, the fluid portions of it may become absorbed, leaving the morphological elements in a solid or semi-solid form in the pleural sac. This, however, is of rare occurrence.

The recovery by spontaneous opening into the bronchial tubes is more common, and is estimated by von Traube, of Berlin, to be about in the ratio of one to five. This is the most favorable estimate of recovery in this way that I have seen, and I question if the average is as good as this. In some cases, where the pus is thus evacuated, the patient succumbs to the exhausting process. Others die from suffocation. One such case came under my own observation a few years since. Those who do survive, go through a painful and protracted illness. There are other considerations that bear upon the question, as to the proper time of operating. Is there danger of exciting inflammation by operating early? Is the operation attended by more success when performed early, or when delayed as long as possible? Is there any danger in the operation itself which affords a reason for delay? My own limited experience will not justify a definite answer to these questions, and writers are not agreed upon the subject. The majority, however, favor an early operation, and claim for it greater success. The views of these authors are forcibly expressed by Lichtheim, in his clinical lecture, "Ueber die operative Behandlung pleuritischer Exsudate." He says:—

"To the question, when shall we operate, there can be but one answer; as early as possible. As soon as a positive diagnosis of a

collection of pus in the pleural sac is established, proceed without delay to the operation. Through delay in these cases, only harm can come, for the longer the disease exists, the more unfavorable is the prognosis of a complete recovery. He who waits for the subsidence of the fever, will only lose time, and will often, in the end, be obliged to operate while the fever still remains. The fever is only the result of pus in a closed cavity. The best means of allaying it is to let out the pus. To wait, even for the first weeks to pass, in order not to operate during the inflammatory stage, as Kussmaul advises, seems to me unnecessary." . . . "I have operated," he says, "in two cases in the second week of the disease, while there were marked symptoms of inflammation, and in both cases the fever abated immediately after the operation."

On the other hand, the practice of Kussmaul, Prof. Lebert, of Breslau, and others, is not to operate until the acute inflammatory symptoms have subsided. They remove the pus by means of the aspirator, and only resort to free incisions after it has reaccumulated.

In the cases that I am about to report, I pursued the more conservative course, which, in some cases at least, must be also the wiser one. It seems to me that we lose nothing by the delay, and often gain much in the way of the improved condition of the patient. The removal of the fluid by the aspirator gives immediate relief, and the patient at once improves up to a certain point, which is usually reached at the end of a week or ten days. As soon as the patient has ceased to improve, and it is evident that pus is again accumulating, then is the time to operate by free incision.

It may well be asked if this method of removing pus from the pleural cavity by permanent openings is one without limitations. Is it applicable alike to childhood and to old age, to persons otherwise healthy and also to those with tubercular lungs, granular kidneys, or other organic diseases?

The answer may be an affirmative one with this qualification, that, if the patient is so far reduced that he probably would not survive the operation itself, or the shock resulting from it, it should not be performed. Complete recovery is more probable in young persons than in old, for obvious reasons. In phthisical patients, the operation has not only been found, by abundant experience, to be safe, but to prolong life, and to do, what is often vastly more important to the patient, render the remainder of life more endurable.

The presence of pneumo-thorax is not a contra-indication, but often an imperative reason for resorting to the operation.

The diagnosis of the purulent character of a pleuritic exudation is now easily made. We are no longer obliged to depend entirely upon general or local symptoms, such as œdema of the affected side, redness of the skin, hectic fever, chills and night sweats. As soon as there is even a suspicion of the existence of pus, an exploratory puncture should be made with the fine needle of the aspirator, which can be done without danger, and with but little pain. Then we proceed upon a certainty, and not an uncertainty.

Having determined upon making a free opening, the three points to be considered are: First, where to make it; secondly, how to make it; and, thirdly, the subsequent treatment. Dr. Bowditch recommends a point in the back, as low down as possible. Kussmaul, and German

surgeons generally, a point in front, midway between the axillary and mammary lines, and in the fifth or sixth intercostal space. The objection to the point in the back is that the ribs approximate to each other more closely there than in front, and this, consequently, adds to the difficulty of keeping a free outlet for the pus, and also to that of inserting instruments of sufficient size for washing out the cavity. There is another, still greater, objection to this point, in some cases, which is that it obliges the patient to sit up, either in bed or in a chair, during the operation, and at each use of the syringe in washing out the cavity. Some of the patients that I have operated upon could not, I am confident, have endured the exhaustion which this would have occasioned. Some, indeed, were so weak as to be unable even to raise the head. How much less able would they have been to sit up once or twice, daily, for ten or fifteen minutes. The only advantage of the point in the back is that the opening can be made lower down, with safety, than it can be in front, and the lower the outlet for the pus the easier it is to keep the pleural cavity well cleansed, and to prevent decomposition. It must not, however, be forgotten that it is possible to select a point too low down for subsequent convenience. When the walls of the chest contract and the diaphragm ascends, which takes place in the course of recovery, the opening may be closed, or, at least, the passage of instruments rendered more difficult. The advantages of making the opening in front are, that there is more space here between the ribs than there is behind, and that the patient can recline in bed during the operation itself, and also the subsequent dressing of the wound and washing out of the pleural sac. My advice upon this point of selection is that, for patients greatly reduced in strength, it is much better to make the incision in front, and for those able to sit up in bed, it is better to make it in the back.

The opening by the knife may be made in two ways: first, by thrusting it, at one stroke, through the skin and underlying integuments into the pleural sac, and then cutting, either to the right or left, to the necessary extent. Secondly, by making an incision through the skin, about two inches in length, and then dissecting down to the pleura. After this, a puncture should be made with the knife, just above the upper edge of the lower rib, and an opening made at once, corresponding in size to the one in the skin. In this way, there is no danger of wounding the intercostal artery, which has been one of the bugbears in paracentesis thoracis. Such a large opening would seem at first unnecessary, but experience teaches the contrary. The diseased side of the thorax soon contracts, and the intercostal space becomes smaller in consequence of the approximation of the ribs and the healing of the soft parts at each angle of the wound. The contraction of the opening is the most troublesome difficulty that we have to contend with in the subsequent treatment of almost every case. This has given rise to various contrivances for the purpose of preventing the closure of the passage before the pus-secreting pleura has healed. Time will only allow me to mention some of them. Both single and double canulæ, constructed for the purpose, have been frequently used, but they are apt to cause irritation and pain. Rubber tubing, *tubes de drainage*, or a piece of gum-elastic catheter, have been and still are employed, but they have often proved unsatisfactory. I have found it difficult to keep them in place until quite recently.

My present method of using them will be explained in the report of my cases. Dr. Anstie recommends the practice of Mr. Goodfellow, which consisted, as before mentioned, in making a counter-opening lower down, drawing a piece of drainage tube through the two openings and then uniting the ends. This is done by passing a long, bent probe, armed with silk, through the opening made in the fifth intercostal space to another intercostal space below and behind this, and then cutting down upon the end of the probe. This being done, a piece of drainage tube should be tied to the silk and drawn through both openings. This is said to keep the pleural cavity well drained. This method has been followed by other English surgeons with apparent satisfaction, but I cannot find a sufficient number of cases reported to enable me to judge of its relative merits.

A more recent method still, is that of Dr. W. S. Playfair. He read a paper upon the treatment of empyema in children before the Obstetrical Society of London, which was published last year in vol. xiv. of its Transactions. His mode of treatment is by means of subaqueous continuous drainage. For a full description, see the above article.

There is no one point in the management of any case so important as that of preserving to the end a free outlet for the escape of pus. Nothing has surprised me more than the amount of constitutional disturbance that always results from even a small accumulation of pus in the pleural cavity, after the opening has been made and air admitted. If pus is allowed to remain stagnant, decomposition is sure to take place, and the patient becomes feverish, loses his appetite, and often manifests even alarming symptoms. In one case that I shall report, this change in the condition of things came on very suddenly, almost like an explosion. Whatever we may think of the germ theory in connection with the decomposition of pus, it is certain that the whole system seems suddenly to be poisoned, and the patient lies, it may be, in a state of collapse. The general plan that I have pursued in the management of all my cases has been, substantially, that brought especially into notice by von Kussmaul, of Friburg, and the one now generally adopted throughout Germany. Soon after evacuating the pus, I wash out the cavity with simple warm water, or with a weak solution of carbolic acid. I use a gum-elastic catheter, passed well through the opening, and through this inject the fluid with a Davidson's syringe, or a hard rubber piston ear-syringe. It is better to use quite a flexible catheter, which can be passed deep into the chest, around or behind the lung, without doing any injury. In this way, one can more effectually cleanse the granulating surface of the pleura. Having thus washed out the cavity, I roll a piece of linen into the form of a stopper and press it firmly between the ribs, or I fold a narrow piece of linen into several thicknesses and crowd it in by means of a spatula or large probe. In either way, I first moisten the linen with a solution of carbolic acid. Outside of this, I lay a compress wet in the same solution, and over it a piece of oiled silk, or thin rubber, and then apply the bandage.

The compress is changed several times a day, and I repeat the injections once, twice or three times a day, according to circumstances. Various disinfectants have been tried, but it seems to be generally conceded that carbolic acid is the best. It is better, where the case is obstinate, to change from one to another. I have tried permanganate

of potassa, iodide of potassium and tincture of iodine, and with advantage. In spite, however, of the faithful use of one, or all of them, I have not always been able to prevent the decomposition of pus.

(To be concluded.)

CASES OF DRAINAGE FROM THE CUL-DE-SAC OF DOUGLASS AFTER OVARIOTOMY.

By GILMAN KIMBALL, M.D., of Lowell.

(Continued from page 136.)

CASE VII.—Mrs. B., of Walpole, Mass., a healthy woman 32 years of age, married seven years, no children, observed, during the past year, that she was growing unusually large. For a time, she believed herself pregnant. Her regular menstruation, however, led her to have some doubt in this respect. She called a physician, and he coincided in the idea of pregnancy. He visited her from time to time, never doubting his first impressions.

In due time, she fancied herself taken with regular labor pains, and sent for her physician. He came, and staid with his patient through one entire night and part of the next day. Seeing matters making no very satisfactory progress, he left her, with the understanding that he should be called again upon a return of regular pains. A week after, pains returning, he was sent for a second time. Another night was passed with no better results. In the morning, being obliged to leave on account of important business in a neighboring town, the physician advised sending for some else to take his place. Dr. Fogg, of South Dedham, was called. He discovered no pregnancy, but a large ovarian tumor instead.

I was sent for the following day, and made my first visit to the patient the 3d of March, 1869. I found, as Dr. Fogg had already stated, a large multilocular ovarian tumor which, judging from various symptoms the patient readily called to mind, had been growing, probably, more than a year.

It was now causing great discomfort, chiefly from its pressure upward, and interference with the free action of the lungs; also from constant irritability of the stomach, so that food, however small the quantity, gave distress till rejected. Emaciation and various other symptoms showed a good deal of constitutional suffering.

The case was considered a proper one for an operation, but not till the system had been put in a better condition to endure it. With this view, and to relieve the present distress, I tapped one of the cysts and drew away eight pounds of thick albuminous matter, at the same time prescribing the muriated tincture of iron, fifteen drops twice a day. A note received from Dr. Fogg a few days after, informed me that the patient was greatly improved—appetite good, irritability of stomach wholly gone, and in every respect much changed for the better.

The evacuated cyst re-filled directly, but the general improvement continued.

In order to take advantage of the favorable change before the return of former troubles, it was decided that there should be no unnecessary delay as to an operation.

Proper preparations were made in pursuance of this decision, and I

made my second visit on the 22d of March. Ovariotomy was performed the same day, Dr. Fogg assisting.

The cyst that first presented itself, upon making an opening through the parietes, was very thin, and readily gave way upon being punctured with a trocar; consequently there was an escape of cystic fluid into the peritoneal cavity. The remaining cysts—five in all—were brought forward one after another and evacuated in turn. There were slight adhesions to the parietes in front, also to the omentum. Several shreds of torn peritoneum were cut away after being tied with fine silk ligatures, which were afterwards cut short. The omentum bled at too many points to admit of separate ligatures; it was therefore tied in bulk and cut clean away. The pedicle was small, and of moderate length, tied with a single ligature, and the stump dropped back and the ligatures passed out of the pelvis by the recto-uterine cul-de-sac through a canula.

The stump of the severed omentum was drawn forward and secured between the lips of the incision near its upper angle.

Incision closed with four deep quilled sutures, the everted lips of the incision making a seam four inches in depth and six inches in length. Superficial sutures and outer dressings as usual.

Slight reaction followed the operation. Next morning, symptoms generally favorable; a quiet sleep of several hours during the night; pulse 90; no pain, no nausea; cheerful countenance, and quite hopeful.

On the fourth day, the deep quilled sutures were removed; meanwhile the symptoms were uninterruptedly favorable.

On the sixth day, symptoms of serious trouble: pain in the abdomen, accompanied with distention, nausea and vomiting, quickened pulse, &c.

The nurse in attendance, a woman of rare sagacity in comprehending the special significance of unfavorable symptoms, and equally prompt and judicious in her manner of dealing with them, conceived the idea that probably the cause of the trouble was an accumulation of matter somewhere in the peritoneal cavity, and that relief was to be had only by getting it away as soon as possible. To this end, she passed a female catheter through the incision, at its lower angle, several inches downward in the direction of the left iliac fossa, and drew away eight or ten ounces of thin, fœtid matter. The result of this procedure was immediate relief; all threatening symptoms subsided in the course of a few hours, and from that time onward nothing occurred to interfere with a rapid and complete recovery.

It should be stated, in reference to this case, that for two days following the operation there passed off through the canula a considerable amount of bloody serum. It ceased, however, on the third day, and never returned in any degree afterwards.

A case, similar to the above, occurred some seven years since in New Bedford. Symptoms almost exactly like those already described declared themselves on the sixth day after operation. The nurse in attendance, rightly conjecturing the cause of the trouble, passed a female catheter through the opening occupied by the out-hanging ligatures of the pedicle, and gave exit to several ounces of fœtid matter. Immediate relief followed, all threatening symptoms abated at once, and the patient made a speedy recovery.

In this case, the pedicle was secured by a clamp, and no arrangement was provided for effecting drainage by canula or other means.

In both the above cases, the symptoms following the operation were apparently the same, and results equally satisfactory. Whether the drainage effected by the canula in the first-named case actually contributed in any degree to the favorable result, is of course a matter of mere conjecture. Seeing, however, that the secondary accumulation and retention of fluids in the peritoneal cavity is understood generally to be by far the most common cause of trouble following ovariotomy, it is certainly fair to presume that, in the case in question, the drainage effected by the canula, though very likely incomplete, may have been of essential advantage in securing a successful result. At any rate, the plan of drainage, as above described, can never be objected to on the score of its being attended with difficulty or risk. Moreover, it never occasions any irritation or discomfort of any kind to the patient.

In many cases of the simplest character, for example, its adoption may be of no special benefit; in others, however, especially where secondary accumulations are almost certain to occur, its advantages would seem to be too obvious to admit of any question.

It will be observed that the symptoms occurring in these two cases were strikingly characteristic of septicæmia; but, fortunately, the cause of mischief was confined within a comparatively small space; it was also so located that by the use of proper means its removal was readily effected. More frequently, however, I have noticed that these symptoms make their appearance more insidiously, and give warning of their appearance at an earlier period after operation. In such instances, it may be calculated that inflammation has invaded the peritoneum to an indefinite extent, and that the poisonous product resulting therefrom has no distinct limits, but is so diffused that its removal can rarely be effected to such a degree as to enable the system to withstand its poisonous effect. Merely making an opening through the incision at any one point, under such circumstances, will avail little or nothing in dislodging the fluid confined within the peritoneal cavity, and the only possible means now remaining for saving the patient from fatal septicæmia consists in the washing-out process first suggested, and successfully practised by Dr. Peaslee, of New York. In three instances, I have seen satisfactory results from this practice. More frequently, however, it has failed entirely.

(To be continued.)

PHANTOM TUMORS OF THE ABDOMEN.—There is often some little difficulty in diagnosticating phantom tumors when they occur in the abdominal muscles. They are sometimes large, hard, and nearly fixed in place, size and form; and they may be deceptively complicated with disorderly states of the intestines, or the aorta, or other abdominal or pelvic organs. But in any case, however difficult the diagnosis, the use of ether or chloroform will decide the matter at once. With complete insensibility, all signs of tumor vanish.—Sir J. Paget, *Lancet*, Dec. 13, 1873.

THE number of medical students in the Vienna School was this year 963, of whom 379 were Hungarians. Breslau had 170 medical students, and Berlin 299.

Progress in Medicine.

REPORT ON DISEASES OF CHILDREN.

By D. H. Hayden, M.D.

[Concluded from page 141.]

New Experiences with Substitutes for Breast Milk.

Hennig (*Jahrb. f. Kinderheilkunde*, vii. 1; *Allg. Med. Central Zeitung*, Jan. 31, 1874).

The author explains the different ways in which cow's milk becomes changed so as to affect the child injuriously. In the institution over which he has charge, he has never been compelled to resort to any other substitute, the milk being supplied from a model-farm in the neighborhood of Leipzig. He attributes this entirely to the kind of food the cow receives, from which the milk for the infants is taken; this being, exclusively, hay, bran, chopped straw, and a little bruised grain. The milk of this cow showed, always, an alkaline reaction. A milk showing an amphoteric reaction comes from cows that are fed with substances not calculated to produce good milk. Such substances are: Rape-cakes, which contain an ethereal oil, and, in case it has become rancid, a fatty acid that passes into the milk. Beer-grounds are often given in large quantities as fodder; this does not give up alcohol to the milk, but diminishes the metamorphosis of tissue of the animal, and often makes it sick. Potatoes are not good for fodder, often causing diarrhœa, and when given in large quantities, moreover, in late spring, may cause solanin to be present in the milk. The author saw obstinate intertrigo and impetigo very frequently in children that received their nourishment from cows fed on the latter substance. Turnips are likewise improper food for cows. The principal food should consist of a soft, sweet, dry hay; also straw, rich in earthy matters and silicic acid, especially millet and clover-straw; in the winter, in addition, bean-groats.

The milk should be given to new-borns for the first eight days in the form of sweet whey, or in a dilution of one part milk and three parts water, with the addition of milk sugar, and when the bowels are constipated, with a little bicarbonate of soda. From the eighth day, a mixture of one part milk and two parts water should be given. After six or eight weeks, the milk should be mixed with equal parts of water, and the milk sugar omitted. When near the period of teething, the water should be but one-third of the mixture, and gradually diminished until we have the milk pure. The author has never seen any harm from giving breast-milk and cow's milk at the same time. After the fifth month, a little meat broth should be given, but no addition of oatmeal or of cracker until after six teeth have appeared.

Such a milk as is furnished the author's institution is often absolutely impossible to obtain in large cities, and other substitutes must be made use of, of which the following are worthy of consideration:—

1. Egg-drink, consisting of 200 grammes of boiling water, which, cooled down to 37° C., is stirred up with the fresh white of an egg, and seasoned with salt. To this mixture is added, later, the yellow of an egg, in gradually increasing doses. This preparation is particu-

larly well adapted as an addition to a weak broth during teething, and should be given once or twice daily.

2. Concentrated milk, which, however, owing to the very large amount of sugar contained therein, out of all proportion to that found in the mother's milk, often occasions diarrhœa.

3. Liebig's food, in the form of extract; one part is to be dissolved in warm milk, previously boiled, and, at each time of administration, to be diluted with an equal quantity of water. After the third month, dilution should be gradually less and less. With this food, however, sometimes the children do not thrive, and vomiting and diarrhœa are caused. This is easily explained, when we remember that cow's milk is given with it. Great value is attached to:

4. Nestlé's infant's meal, in which a good Swiss milk in concentrated and dry form is added to the other ingredients. For very young infants, the proportion should be one table-spoonful of the powder to ten of water; for older ones, one to eight. To obtain a milk-pap, one spoonful of the powder should be stirred up with six spoonsful of cold water, and then boiled for a few minutes. This pap is suitable only for children with several teeth. The author has rarely seen any diarrhœa supervene upon the use of this powder, and never abscesses of the skin, or intertrigo.

5. Finally, the author has, in three cases, used a very finely divided mixture of leguminous and cereal meal, of Hartenstein, in Wiederwiesen. Of this, a dessertspoonful is slowly stirred up in a soup-plate full of cold water, and, with the addition of a little salt, heated to the proper temperature.

The Cure of Croup without Emetics.

Dr. Hermann Klemm, Leipzig (*Jahrb. f. Kinderheilkunde* N. V. vi. 4, p. 372, 1873; *Schmidt's Jahrbuch*, No. 10).

Emetics are only useful, as is well known, in the earliest stages, when we cannot be certain if we have to do with false or true croup. An emetic in such case removes spasm of the vocal cords and of the neighboring parts; if given again, later, with the expectation of loosening membranes, they are generally of no effect, or if vomiting is produced it does not loosen the membrane, and the child is unnecessarily weakened. The author saw in four cases decidedly beneficial results from Priessnitz's treatment, which Hanner already previously recommended. One of these cases, reported in full, appears to have been a severe case of true croup, but there was no microscopic examination of the thick, yellow, muco-purulent expectoration that followed later. The author recommends strongly in these cases the cold-water treatment, and gives the following cautions in using it. The child should not be carried about, as this prevents the sufficient amount of sweating. The child should be subjected early to the wrappings, to prevent carbonic acid poisoning of the blood taking place, and we should resort to this immediately after producing vomiting, if this have not been followed by improvement, or if vomiting be not produced. The wrapping is to be repeated every two hours. As local remedies, the author uses, in addition, inhalations of lime water, or of a solution of chlorate of potash. Local applications of nitrate of silver are not recommended, especially as it is very difficult with children to introduce a brush into the larynx with the aid of a mirror, and any other

method would be of no use. Small doses of morphine relieve the difficulty of breathing, and should, therefore, be given, even in fatal cases. The author is silent on the relief afforded by tracheotomy in such cases.

A Case of Belladonna Poisoning.

Dr. Ludwig Fleischmann reports the following case in the *Wiener Medicinische Presse*, April 5, 1874, No. 114.

For the patient, a young girl six years old, affected with bronchial catarrh and a very troublesome, dry cough, a two-ounce mixture, containing six drops of tincture of belladonna, was ordered, the whole to be taken in the twenty-four hours. After the third dessertspoonful, the child's pupils became dilated, the eyes had a wild, staring look, and the patient became very restless and delirious. The head was rolled about, and the patient acted as if she saw figures in the air, with which she wished to speak. At the same time, there were violent movements of the hands and fingers, and frequent pickings at the bedclothes. The face was red, and, owing to pain in the throat, the child refused to take drink. The proper antidotes were administered, and the next day there were no symptoms remaining, save the dilated pupils and redness of the cheeks. A careful chemical analysis of the remainder showed no reason to suspect that the prescription was improperly put up. In this case, therefore, the symptoms of poisoning were produced by two drops of the tincture. Reckoning the proportional dose for a child of this age to be one-third, and the maximum dose for an adult to be twenty-eight drops, three or four times a day, a single dose for this child would be nine drops. According to the Austrian pharmacopœia, the tincture is prepared stronger, and the maximal dose should be four to six drops thrice daily. Little anxiety is needed in prescribing belladonna for children, who, it is well known, tolerate this medicine, as a rule, well, in large doses. Many cases of poisoning with the fruit of this plant, eaten in very large quantities by children, have been reported where complete recovery took place, and it is not rare to prescribe it in good-sized doses, much beyond the physiological dose, in whooping-cough, without producing its poisonous effects. The author has himself seen ten drops of the tincture given within twenty-four hours in severe cases of laryngo-spasms without unpleasant effects, and still more frequently are large doses of the extract given. The above case is of particular interest, owing to the small dose of two drops producing for a short time very characteristic symptoms of poisoning, and also to the accumulative action of the medicine, which, given in divided doses every two hours, produced symptoms of poisoning within seven hours after the first dose.

Poisoning by belladonna, considering the frequency of its administration, is rare, and the most frequent cases are those where the berries have been eaten. Schroff relates a case where smoking the dried leaves was the cause of fatal poisoning. Owing to the more and more general use of atropine internally, the cases of atropine poisoning are more frequent. In the present case, we are forced to assume a peculiar susceptibility in the organism of the patient, which susceptibility was increased by a febrile disease, and a nervous irritability in a nascent state.

Chloroform in Eclampsia Infantum.

C. F. Kunze (*Allg. Med. Central Zeitung*, April 1, 1874, No. 26).

In by far the greater number of cases of convulsions, we are unable to detect the cause, and it is a well-established fact that such convulsions can take place without important organic changes being present. The conditions causing the convulsions pass rapidly away, and it is not even necessary that there should be any cerebral congestion. In all probability, we have to deal with an abnormal irritability of the nervous system. As proof of this, we find no increased temperature of the head, no injection of the bulb of the eye, no vomiting; there is no constipation, and no inflammatory pulse.

The author reports the following case: M. R., 11 years old, stout built girl, had, in her fourth year, a sickness, in which she had an attack of eclampsia infantum. The attack lasted two or three hours, and ceased after the administration of a stimulating enema and cool applications to the head while in a warm bath. No bad effects were left behind.

January 16, 1874.—Without known cause, was found unconscious, with general convulsions. The author being called, ordered three leeches to forehead, enema of salt and water, and an ice bladder to the head, although he found neither increased temperature of the skin nor of the forehead, and the child had had a regular operation the day before. No errors of diet had been made, the abdomen was soft, and there was no where tenderness on pressure. The pulse was 120–130 in the minute, and not particularly hard. At his second visit, four hours later, the leeches had drawn, and there had been a dejection; the head was cool, and yet the convulsions had not ceased. As the child had become cyanotic, and the lips were blue, and the respiration very rapid, with tracheal râles, the present condition having lasted eight hours uninterruptedly, it was expected that death would soon ensue. An attempt was then made with chloroform dropped upon a handkerchief. The convulsions ceased after a few inhalations, but consciousness did not return. The handkerchief being removed, the convulsions returned after a few minutes, and the chloroform was reapplied with equally good result, though but for a short time. Being then applied for double the time, the convulsions stopped for a quarter of an hour. With the next return, the application was carried to full narcosis. The child then began to breathe more slowly, the pulse went down to 100, the tracheal râles diminished, the blue lips became red, as well as the cheeks, and after half an hour the child opened its eyes and returned to consciousness. After that, there was no return of the convulsions. At the evening visit, the child was somewhat excited, but otherwise there was no disturbance of any kind. A solution of bromide of potassium (5.0 grammes ad 120.0 grammes water) was prescribed, and since then (six days afterwards) there was no return of convulsions, and the child was apparently in complete health.

Resolutions eulogistic of the character and labors of the late Dr. George Derby have been passed by the State Board of Health of Michigan, and the State Board of Health of California. These testimonials from such distant States are a significant evidence of the far-reaching influence of Dr. Derby's enthusiasm and ability in the department of science which he loved so well, and in which he worked so faithfully.

Bibliographical Notices.

Lunatic Hospital Reports.

We have before us reports from Dr. Roy, of Quebec, Dr. DeWolf, of Halifax, Dr. Bartlett, of Minnesota, Dr. Kirkbride, of Philadelphia, Dr. Brown, of Bloomingdale, N. Y., Dr. Sawyer, of Providence, Dr. Jelly, of the McLean Asylum, and Dr. Walker, of the Boston Hospital.

These reports deal for the most part with affairs of local interest, and make no attempt to include matters of importance to the profession. This policy seems to be justified by the official character and limited circulation of the reports, as well as by the overwhelming amount of work usually devolving on the meagre medical staff of our insane hospitals. When a superintendent does find time to include a little of the result of his experience in a report it is doubly welcome.

Dr. Kirkbride discusses and approves the unanimous resolution of the Association of Medical Superintendents of American Institutions for the Insane, at their meeting last year, in regard to the care of criminal lunatics. The gist of it is that such criminals as become insane should be cared for in wards attached to a prison, or independently situated, and not in the existing State hospitals.

Dr. Roy has some interesting statistics and remarks on intemperance as a cause of insanity, and opposes the separate treatment of the so-called incurables.

Body and Mind. By Henry Maudsley. Second American Edition. New York: D. Appleton & Co. 12mo. Pp. 275.

The second London edition of this now familiar book, and identical with the one in hand, was noticed in the Journal, Nov. 13, 1873, at sufficient length to give the reader an idea of its value, not only to the profession but to the public. The subject, under Maudsley's treatment, becomes of general interest, and the book, though thoroughly scientific in spirit, is in active demand outside of medical circles. Four lectures constitute the first part, carrying the reader logically upward from the lowest evidences of intelligence in the animal kingdom to the highest, from reflex action to the organization of conscience. The second part consists of four essays: on Hamlet, Swedenborg, The Theory of Vitality, and The Limits of Philosophical Inquiry.

The Physiology of the Circulation in Plants, in the Lower Animals, and in Man. By J. Bell Pettigrew, M.D., &c. London: Macmillan & Co. 1874.

In the work before us, the author aims "at producing a comprehensive view of the circulation as it exists in the lowest vegetable and highest animal forms," endeavoring "to prove by a variety of arguments that the circulation, whenever and wherever found, differs less in kind than in degree," and that "the circulation in the lower vegetables and animals gradually developes into that of the higher, until we reach man himself; the circulation in the one being relatively as perfect as in the other."

In pursuance of this object, the author describes the circulatory system in a variety of plants and animals. Where original anatomical investigation forms the basis of these descriptions they are, as a rule, clear, accurate and minute, and constitute the really valuable portion of the work. The description of the muscles and nerves of the heart may be quoted as an example. But where function is to be inferred from structure (for it is in this way, and not by experiment, that most of Dr. Pettigrew's physiological ideas have evidently been obtained), the author's ignorance of physics and disregard of logic render his work entirely untrustworthy, and, in the hands of beginners, absolutely mischievous.

The fundamental idea which runs through the whole volume is, that the

so-called relaxation of a muscle is as much an active process as its contraction, and that the cavities of the heart, therefore, in dilating, fill themselves by suction. No experiments are offered in support of this view, and the experiments of others, which are inconsistent with it, are ignored. There is no allusion, for instance, to Kühne's experiment showing that a muscle, lying on quicksilver in order that it may not have even its own weight to support, retains very nearly its contracted form even after the removal of the stimulus which has caused contraction. The fact that there is no theoretical reason why the sarcous elements should not change their form in one direction as well as in another seems, for the author, to be a sufficient reason for concluding that both lengthening and shortening are active processes.

The volume abounds in statements without proof and in defective syllogisms, and were it not for a certain amount of good anatomical description and some ingenious suggestions of analogies, the work would hardly repay perusal. H. P. B.

Archives of Electrology and Neurology: A Journal of Electro-Therapeutics and Nervous Diseases. Edited by GEORGE M. BEARD, A.M., M.D. Vol. I. No. I. May, 1874. New York: T. L. Clacher, No. 107 East 28th Street.

THIS is a handsome octavo of 143 pages, of which 115 are devoted to original articles. Its aim seems to be mainly clinical, and to be limited almost entirely to the explanation and illustration of the physiological and therapeutical actions of electricity. Viewed in this aspect, the *Archives* present a valuable and interesting group of contributions to medicine. We are particularly pleased with articles on Electrolysis of Scirrhus of the Rectum, by Prof. Crosby, of New York, and on Paralysis of the Recurrent Laryngeal Nerve, by Dr. Knight, of Boston. The remarks on Electrolysis of Stricture of the Urethra are diffuse, and are not quite clearly made, but appear sound and reasonable. Dr. Beard's description of his method of treating the base of malignant tumors is clear, and worthy of attention. Roberts Bartholow gives a fuller account than has yet been published of the experiments he made in stimulating the brain of a living woman. To physicians desirous of learning more about the medical electricity of our day, the *Archives* will be very interesting. A second number is promised in six months.

BOOKS AND PAMPHLETS RECEIVED.

Inorganic Cardiac Murmurs. By A. D. Keyt, M.D. Cincinnati. Read before the Ohio State Medical Society, June, 1874, at its Annual Meeting in Toledo.

The Psychological Journal has re-appeared with the title of the Psychological and Medico-Legal Journal. It is edited by Dr. Hammond, assisted by Dr. T. M. B. Cross. The style and binding of the Journal are new and tasteful, and the contents of the first number interesting.

Messrs, Wm. Wood & Co. announce the translation of a Cyclopædia of the Practice of Medicine, edited by Dr. H. von Zeimssen, Professor of Clinical Medicine at Erlangen, assisted by the most eminent clinical instructors of Germany. The translation will be done by professional gentlemen, many of them former students of the writers of the different treatises. It is proposed to publish three or four volumes a year in order to distribute the cost of subscription equally over four years.

Essays on Conservative Medicine and Kindred Topics. By Austin Flint, M.D. Philadelphia: Henry C. Lea. 1874.

The Physiology of Man. By Austin Flint, Jr. M.D. New York: D. Appleton & Co. 1874. (For sale by James Campbell.)

Transactions of the Eighth Annual Meeting of the Medical Association of the State of Missouri, held at Sedalia, April 21, 1874.

Boston Medical and Surgical Journal.

Boston: Thursday, August 13, 1874.

Who is to blame for the abominable crimes of the day? The government, encouraged or bullied as it is by the mistaken and false philanthropy of the day. "Thou shalt not commit murder" is held up as the commandment to Governors and Councils as a positive reason for pardoning crime, and the consequence is a dozen murders by those who know, or who calculate, that punishment will never overtake them As we h ave before intimated, it is our opinion that insane people, as a rule, know enough to restrain themselves, when everyone else knows that certain results as punishment will surely follow certain causes. The insane man, who is deprived of clothing because he tears it up, learns to restrain his temptation to tear, and if his insanity be so positive and so incurable that he cannot refrain from taking life, the sooner he is put where he is past temptation the better.

What is punishment for? We are told, to reform the bad and to protect the public. Is the punishment established by the laws too severe? If so, abolish the laws or modify them; but let us know if we have got to go from our houses armed for our own protection, which the law refuses us! Within a few weeks, the Governor of Maine has deducted from the sentences of various prisoners an average of one hundred and fifty days, variously ranging from eighteen to four hundred and sixty-nine days. This was for good conduct in prison; an absurd, a wicked reduction, if the original sentence was just. It is simply an offer to others in prison to behave well long enough to get out of prison to begin crime again.

The Lieutenant-Governor of this State has done worse than that. He has pardoned Thomas R. Stackpole, who was sentenced to twenty years imprisonment for attempting to commit rape; and he has pardoned Michael Carty, who was sentenced for life for committing rape; and he has pardoned William R. Scott, who was convicted on the charge of inducing a girl to commit suicide, and *no cause is assigned for the pardons.* Were these all pardoned because they have become good men and true? Or were they insane? Or what? The public will not always consider the plea of insanity a good excuse for crime. It is almost time for government to protect the victims, as well as the subjects, of insane impulse. The public must, sooner or later, see the absurdity of trial by jury, when juries are made up as they are to-day, and where it is only necessary to plead insanity as an excuse for the vilest of criminals. The better class of New York citizens may soon-

er or later be tempted to imitate the San Francisco vigilance committee. If kidnapping and murder are to be as common as is promised, Philadelphia and Boston will not be long behind them.

At a meeting of the Commissioners of Charities and Correction in New York, held during the last week in July, a resolution was introduced and passed re-organizing the Medical Board of Bellevue Hospital. This Board consists of nineteen members, twelve of whom have been removed from their positions by the terms of the resolution referred to. The names of these gentlemen are as follows:—Drs. Isaac E. Taylor, Lewis A. Sayre, John J. Crane, John W. S. Gouley, B. Fordyce Barker, Frank H. Hamilton, Alexander R. Mott, Thomas M. Markoe, Austin Flint, Jr., Wm. M. Polk, Wm. T. Lusk, and E. G. Janeway. Of these, Drs. Crane, Sayre and Taylor have been members of the Board for twenty years, and the majority of the others from five to fifteen years.

One would naturally suppose that the Commissioners had been influenced only by the most weighty reasons in taking such unusual and extraordinary action in regard to the Hospital appointments. Thus far, however, no reason whatever has been assigned by them for this change. This action on the part of the Commissioners will seriously cripple the corps of instructors at the Bellevue Hospital Medical College, and, if persisted in, may result in the destruction of the School. It is darkly intimated that professional jealousies are at the bottom of this movement, and that the brilliant and rapid success of this school has made it altogether too dangerous a rival to older seats of medical learning. We can hardly believe that the profession of New York will countenance any such movement as that which has been hinted at, and we shall hope to hear that the force of medical opinion has induced the Commissioners to see the propriety of reconsidering their action.

Some of the legitimate results of the late hydrophobia excitement in New York are now beginning to make themselves apparent, and offer forcible examples of the evils that may arise from the injudicious efforts of an enterprising press to afford entertainment to its readers during an unusually dull season. We learn from one of the New York papers that a member of the police force of that city was recently bitten by a dog, and after a short period of incubation, during which the man was in an unusually depressed and nervous state of mind, symptoms of hydrophobia began to show themselves. The unfortunate patient was immediately subjected to various tests, and some of the new and infallible modes of treatment lately discovered in New York were planned for him. Fortunately—for the patient—his case has turned

out not to be hydrophobia, and the poor creature has been allowed to return to his home from the Park Hospital, whither he had been sent the day previous.

Cases of hypochondriasis, of which the above was perhaps a more striking example than usually occurs, are, unfortunately, but too frequent in times of hydrophobia excitement like that through which New York has lately passed, while at the same time it is, to say the least, somewhat doubtful whether the disease has been unusually prevalent, the character of many of the so-called cases of hydrophobia being extremely uncertain.

The entertainment and instruction which the New York public has received from enterprising reporters, and, we regret to say, from certain members of the medical profession, can hardly compensate for the agony of mind endured by a number of unfortunate hypochondriacs during the weeks which have followed this excitement. The canine species can also well claim a share of our sympathy at this time. The way in which many slightly indisposed members of this race have been either chased, muzzled, shot or asphyxiated (by a process said to be ingeniously cruel), and the dental operation to which it is proposed to subject their more fortunate brethren, are all symptoms but too suggestive of the hysteroid condition of the public mind.

It is a pleasing contrast to turn from these accounts to the timely work on Rabies and Hydrophobia, by George Fleming, an English veterinary surgeon, a notice of which has lately appeared in the *British and Foreign Medico-Chirurgical Review*. The author's suggestions in regard to the general plans of prevention which ought to be adopted by local authorities in reference to hydrophobia, although not novel, are sensible and interesting in this connection. In addition to taking due care of the health of dogs when employed for useful purposes, he recommends the diminution of the number of useless dogs, and especially in the case of dogs kept by poor people, "both on the ground of the propagation of disease by ill-fed and dirty creatures, and also because the consumption of food required for their maintenance represents so much aliment substracted from the poor people themselves." The keeping of pleasure dogs by the rich is strongly condemned, and to lessen the number of these pets he suggests the imposition of heavy taxes. By some such precautions as these, continually and stringently kept in force, we might be spared much fear and excitement on the part of the community, and periodical slaughters similar to the one we have recently witnessed.

The Massachusetts Railroad Commissioners did an excellent thing recently in urging the discontinuance of the use of the locomotive

steam whistle on the lines of railway leading from the city, exception being made only in the case of emergency, as a danger-signal. Aside from the annoyance which the locomotive shrieks have caused to people in health in the thickly settled districts through which some of the roads pass, the distress and permanent injury inflicted on invalids by what is shown to be an unnecessary practice, should have long ago caused this peculiarly American institution to be numbered among the half-forgotten barbarisms.

Correspondence.

Professor Schiff Vindicated.

Messrs. Editors,—Various reports, accusing Prof. Schiff, the eminent physiologist, now in Florence, of unnecessary cruelty in his experiments upon living animals, have appeared in some of the European and American journals within the last year or two. For those who know Prof. Schiff personally, no refutation or denial of these reports is necessary. Those who know him only as an accomplished and eminent physiologist, who has added largely to the physiological knowledge of the present day (and consequently to the relief of human suffering), will be glad to learn from the subjoined communication that no cruelty or unnecessary pain has been inflicted by him in his scientific investigations.

Dr. William Wilson, from whom I received the following communication, I am happy to say, is known to me personally. He is an English physician, a fellow of the Royal College of Physicians, London, and formerly was physician to the Royal Free Hospital, London. His statements may be accepted without reserve. A natural indignation at the slanders perpetrated against his distinguished townsman pervades his letter.

Very truly yours, Edw. H. Clarke.

A few months ago, some serious charges were brought against Prof. Schiff, the eminent and learned Professor of Physiology in this University, of unnecessary cruelty to animals in the prosecution of his scientific researches; some of these were preposterous and ridiculous, many so much so as to carry with them their own refutation; but, nevertheless, they produced a painful feeling in the public mind. For my own part, I was simply astonished, having worked for many months in successive years at the Laboratory, and having always seen much of the kindness of feeling shown by the professor to the unconscious contributors to physiological science. Now, admitting that some or all the parties who rushed into print were actuated by humane and honorable feelings, the most cursory examination proves that all their statements are grossly exaggerated.

A writer in the *Times* says: "Owing to the temporary absence of counsel, the action which had been brought against Professor Schiff and the municipal authorities has been adjourned;" adding, "no further notice of the trial has since appeared in the Florentine journals;"—then comes a gratuitous assumption of his own—"probably because the point at issue has been privately and amicably settled, and the defendants have pledged their words that the offence shall not be repeated." Now no trial was ever brought against Professor Schiff or the authorities. Prof. Schiff was once summoned before the tribunal as a witness, and his evidence was such that the parties who gave notice of an intended trial not only withdrew it, but the Marquis Capponi wrote a letter to the professor, declaring that he had not charged the professor with the offence referred to, and that it was all a mistake; the first assertion was false, the second correct. The professor's evidence satisfactorily proved that the screams and barking complained of originated,

principally, from his accusers' own dogs; that his dogs, of which there were very few, were excited by this during the night, and during the day by the presence of a number of strange workmen. The correspondent having now established a fact (?) to his own satisfaction, comments on it as follows: "We have not been told whether the German professor has been bidden to desist, or has been simply bound to choose a more quiet locality for his exploits."

A writer in the *Saturday Review* says: "In all great centres of scientific inquiry, Paris, Berlin, Vienna, &c., vivisection has been forbidden, and the professor will surely be given to understand that if vivisection is at all required in the interests of science (about which competent persons entertain serious doubts), it should not be practised without such relief as ether and chloroform afford in all painful operations on the human body, and the German professor well knows that he would be taken to task and punished in his own country." This is a pure invention; the professor always uses chloroform on such occasions, and it is perfectly notorious that there is a Physiological Laboratory in every German University; therefore it is clear that *competent judges* do hold the study of physiology to be of paramount importance to the student of medicine and surgery.

In another communication, Dr. W., a Homœopathic correspondent, says: "During a very long course of study at the Medical School of Florence, I never heard of Prof. Schiff's using chloroform; *he used occasionally to make an aperture in the windpipe, in order to suspend the action of the larynx, and thus prevent the exquisitely tortured animals from crying out in pity.*" The italics are mine. The writer tells us he has studied physiology under eminent and qualified experimenters in France and Italy, yet it never occurred to him that the aperture in the windpipe was a necessary step in the performance of artificial respiration, by which Prof. Schiff has satisfactorily proved that the fatal effect of poisoning from strychnine, curara, &c., may be obviated. When Dr. W. studied in Florence, there were no lectures on Physiology, and no Physiological Laboratory. Prof. Schiff declares he does not know his assailant by sight, and does not believe he ever was in his Laboratory.

Another interesting charge of cruelty and indifference to suffering is brought against the unfortunate professor. The eminent Prof. Desor paid a visit to the laboratory, and took a non-practising medical friend with him, who wrote an article in one of the Italian papers, thus disclosing the secrets of the prison house: "Among the animals was a large dog, from whose left side was hanging an internal organ, either the stomach or a portion of the intestine, the result, probably, of an operation recently undergone." The aforesaid dog did not even belong to the professor, but, in consequence of this circumstance, was retained for some time, and exhibited as a curious specimen of accurate diagnosis. He was the subject of *congenital umbilical hernia.*

The redresser of the wrongs of dogs further says, "the keeper of the Dogs' Home told me that he had made over to the Professor 700 dogs in one year, and I have no hesitation in saying, from past experience (?), that 680 of them were tortured for nothing." Now, during two months that hydrophobia was exceedingly rife at Florence, the police regulation that all vagrant, unmuzzled, ownerless dogs should be seized was stringently carried out, and, during that period, 120 of these were consigned to the physiological laboratory. Now this number is ingeniously but dishonestly multiplied by 6, thus forming a total of 720, as though the epidemic had lasted a whole year. During the months of October, November and December of 1873, 33 dogs were delivered to the laboratory, and following the above mode of calculation, Prof. Schiff only received 132 in the year.

The writer next quotes the Homœopathic axiom, "Physiology never can relieve human suffering, or prolong life; it has never pointed out a single remedial agent for the relief of disease." Again, "Physiology aims at a knowledge of the functions of health, of the formation of healthy states (rather an ambiguous expression), but this knowledge can never suggest a remedial agent." Does the writer mean that no deductions drawn from the study of

physiology ever suggested a remedy? Or is it a mere quibble, on the principle that anatomy never performed an operation? As to repudiating all attention to healthy function as a guide in appreciation of morbid phenomena, how estimate a deranged condition of the circulation unless conversant with the normal state of the pulse? Dr. Fayrer, in India, has made some interesting experiments on dogs to test the statement of Dr. Halford, in Australia, that ammoniacal injections into the veins is a certain and unfailing antidote against the poison of serpents introduced into the human system. The result has been that, whatever the case may be in Australia, it is no antidote whatever against the more virulently poisonous reptiles of India; would the writer contend that no good has resulted from these experiments? Had Dr. Halford's assertions been accepted, without questioning, in India, much loss of life might have resulted therefrom. In the same way many experiments recently instituted have established or controverted the correctness of experiments performed by earlier inquirers; further, Prof. Schiff's assailant would probably maintain that all electrical experiments on healthy tissues would be no guide as to its employment under diseased or deranged conditions of the nervous system.

The *Daily News* declares "that after the great exposures made at Prot. Schiff's trial (there never had been the semblance of a trial), there can be little doubt of the necessity of placing on the practice of vivisection those limits, &c. &c." This is an instance of the practice adopted by these writers of assuming a fact as established, to tally with certain conclusions which they deduce from it. The same journal protests against all experiments in physiology, maintaining that if anything is at all desirable, it could be effected by means of pictures and models, or the dissection of dead bodies!!! It may be observed that thus, after holding Prof. Schiff to public execration for daily and nightly cruelties, they have now addressed a letter to him, of apology, and confessing that the whole thing was a mistake!!! The fact being that upon an inquiry they ascertained that at the period when these accusations were brought against him, Prof. Schiff was not on the premises; in fact, during part of the time, he was in Paris, where he used his influence in inducing some experimentalists to employ ether in cases where it had not otherwise been used; further, a letter was addressed to Prof. Schiff in one of the public papers from several influential persons, stating that they withdrew their names, and expressing their regret that they had signed a paper calling upon the legal authorities to prosecute the said professor, they, upon mature inquiry, having ascertained that those charges were perfectly groundless.

These accusations have had a wide-spread circulation among the travelling American public, who, having read the charges without seeing their refutation, on returning to their native country might innocently express their horror of cruelties supposed to have been perpetrated by a man who is an honor to science and progress. I have therefore thought that a true exposition of the facts might not be misplaced, and would enable members of the profession to express, without hesitation, their disapprobation of such proceedings, and to assure those with whom they might come in contact that the parties promulgating the said charges were not guided by a simple love of truth and justice.

WILLIAM WILSON, M.D., F.R.C.P.

Florence, June 28, 1874.

GUSSENBAURE'S FRACTURE APPARATUS.

VIENNA, July 20, 1874.

MESSRS. EDITORS,—In your issue of June 18, is a slight mention of Dr. Gussenbaure's apparatus for fractures of the upper end of the humerus. Please allow me to make a correction. Extension is not made by "weight and pulley," but, as in Taylor's apparatus for hip-joint, by the key and ratchet principle; that is, the points of extension and counter-extension are connected by a steel shaft. This is formed of two rods, one sliding within the other, and moved by a key, which fits into the cogs on the smaller rod.

As Dr. Gussenbaure says, his splint is the principle of Taylor's hip-joint

apparatus applied to the upper extremity. It is modified to avoid the pressure on the vessels and nerves, which would result from taking the axilla as a point of counter-extension. To effect this, on the upper end of the steel shaft is fastened a steel bow, large enough to encircle the axilla; it can be hooked above to a metal piece, which fits on the shoulder. This is fastened to a gutta percha shoulder-cap, which is held in its place by adhesive plaster and bandages.

The point of counter-extension being the shoulder, the point of extension is at the elbow. Strips of adhesive plaster connect the arm below the fracture to a metal strip, padded, which fits under the point of the elbow (the arm being flexed). This metal strip is welded to the steel shaft applied to the inner side of the arm. The steel bow at the upper end of the shaft is hooked on to the shoulder-piece, the shaft is lengthened by means of the key, and extension is applied.

The steel bow and the metal piece on the shoulder-cap both rotate so that the apparatus can be applied to either side.

In the place of the shoulder-piece, Dr. Gussenbaure has used a light yoke, fitting on both shoulders. It was devised with the idea that it might be required where a great deal of force was needed in extension. He is not, however, sure that it will ever be necessary.

An apparatus is, if I remember, figured in Hamilton's Fractures and Dislocations, something similar to this, differing, however, in that the steel rod is to the outer side or back of the arm. This German splint, though a little more complicated, has, as I think, the advantage of more steadiness, and is, therefore, capable of applying more extension.

In the few cases in which the apparatus has been applied, it is said to have been very serviceable. Yours truly, E. H. BRADFORD.

Obituary.

DR. H. P. BLAIR.

DR. HORACE P. BLAIR died in Georgia, Vermont, July, 14, 1874, in the 76th year of his age. He was the only surviving physician who was in practice in Franklin County forty years ago, except one, the venerable J. L. Chandler, of St. Albans, now in his 82d year. Dr. Blair was a worthy, exemplary man, a kind and judicious physician, a man vigorous and healthy, for one of his years, and bade fair to live to extreme old age. The latter part of April last, he discovered a small, hard tumor on the right lobe of the thyroid gland. It gave him very little discomfort, except mentally, for it was his impression that it would be something that was of a malignant nature, and prove fatal. Three weeks from his first discovering it, he called my attention to it. It was large as a small-sized hen's egg, and of a hard feeling, almost like bone. The tumor continued to grow with great rapidity, causing difficulty of respiration and deglutition, and caused his death in ten weeks from his first noticing it. According to his wish, as well as that of his friends, the tumor was removed after his death, in the presence of Drs. Chandler, Branch and Dunsmore, of St. Albans, and Clark and Knight, of Georgia.

It proved to be a well-developed, medullary cancer, or a large portion of it was of the encephaloid variety; its weight, when dissected out, was one and one-half pounds; some portions were hard, almost cartilaginous, and one portion, of an ovoid form, about three-fourths or seven-eighths of an inch in diameter, appeared to be solid bone, but on further examination a small aperture was discovered, and it was found to be hollow, or rather filled with a cream-like pus. What surprised us was its rapid development and malignancy, destroying a healthy, vigorous man of his years, in the short space of ten weeks. No other disease was apparent. None of the physicians present had ever known so rapid a growth, and so full a development in so short a time, and hope, at least, such cases are not common. R. K. CLARK, M.D.

Medical Miscellany.

DR. C. F. FOLSOM, the recently appointed Secretary of the State Board of Health, has returned from Europe, and will enter on the duties of his office the middle of September.

THE International Pharmaceutical Congress will be opened at St. Petersburgh to-day. One of the principal questions of discussion will be the formation of an International and Universal Pharmacopœia.

THE weather, this summer, in Dublin, is said to have been extraordinarily oppressive, and cases of sunstroke have occurred. This is in marked contrast to the comfortable weather we have enjoyed thus far this season.

AT the last meeting of the Massachusetts Medical Society (its ninety-fourth annual meeting), papers of great value were read, and the attendance was very large; larger, it is said, than the attendance at Detroit. Dr. Benjamin E. Cotting, of Roxbury, was elected President. A wiser and better selection could not have been made; the newly-elected President, both personally and professionally, deserving the honor conferred.—*American Medical Weekly.*

THE OUT-PATIENT SYSTEM AT LYONS.—In Paris, and all large towns of France, there is the same abuse of indiscriminate gratuitous advice at the hospitals as with ourselves; persons, who are perfectly well able to pay, not hesitating to over-crowd the out-patient rooms. Not only do many thus get advice most undeservedly, but the number of patients is rendered so numerous as sometimes to require one hundred to be seen within an hour. At Lyons, the authorities have determined upon attempting to limit this abuse by laying down the rule that no applicant shall be entitled to gratuitous advice unless provided with a recent *certificat d'indigence.—Union Medical*, July 14.

A WORD IN TIME.—"It surely is time," says the *British Medical Journal*, speaking of a vacant office in Edinburgh, "that the system of testimonial-begging, and the highly objectionable attitude of blowing one's own trumpet, which it forces upon a number of excellent and otherwise modest and dignified men of science, should have some check put upon it. . . . A system which is alike degrading and unsatisfactory to the candidate for appointment, to the individuals who are asked to favor him with one of the usual 'puffs,' and to the electors to whom the collection of so-called testimonials is addressed. . . . In Germany, candidates are not even invited to apply, but the members of the governing body address an invitation to the man whom they consider most competent; . . . (here) it is the man of science . . . who adopts the attitude and language of a pill-quack, or of a flunkey out of place, in order to get elected . . . (to expect which is) an insult to the relf-respect of professional and scientific men."

Let the members of our profession look sharply to it that this vile system does not get a foothold amongst us.

A WATERLOO BULLET.—The following particulars regarding the bullet extracted from the Waterloo veteran, residing at Wadhurst, Sussex, may be of interest. Cases in which bullets have long remained buried in the tissues, with little or no practical inconvenience, are not uncommon, and Dr. Henry Harland, who extracted the one in question, did not attach any professional importance to the circumstance, apart from the time it had remained, and the historical reminiscences and interest connected with it. The name of the Waterloo veteran is James Jenner, who has reached the good old age of 83. He was in the 44th Regiment, and in the thick of the action near Quatre Bras, when he was struck in the hand by a French bullet, which, having passed through the fleshy part of the ball of the thumb, became imbedded in the palm of the hand, where it remained for upwards of fifty-nine years.

The contraction and thickening of the palm made it difficult for him to hold his agricultural implements, and about three months ago, whilst working as a gardener on some hard ground, the hand inflamed and an abscess formed, from which a ball was removed, which weighed exactly six drachms and five grains. It had retained its original shape, and was slightly flattened at one part where it had struck against the barrel of his musket. The wound is rapidly healing.—*The Lancet.*

NOTES AND QUERIES.

"Progress in Medicine"

Is the title of "the President's Address" at the annual meeting of the South Eastern Branch of the British Medical Association, by George F. Hodgson, M.R.C.S., of Brighton. From this address we wish to take a paragraph to show our younger men what progress has been made by the unselfish efforts of their predecessors, though they can never realize the courage and endurance that have been necessary to effect the change. Parsfui.

"Many invalids come to Brighton to convalesce (sometimes to die). Among such as come under my notice, one every now and then turns up who has been mercurialized, and that for non-specific disease. It is against the perpetuation of such a mistake that I wish before this considerable assemblage of medical men to protest. Of course, in common with all the rest of you who have attained to middle life, I was trained by my teachers to consider mercurialism as indispensable in the treatment of all acute inflammations. The classical lectures of Dr. Watson forcibly impressed this upon us, and, in equally powerful and elegant language, Dr. Latham's clinical lectures made it a *sine qua non*; but these were about the last physicians of celebrity who so taught. About fifteen years back, Professor Bennett, of Edinburgh, and the late Dr. Todd, of London, both taught and published the uselessness and the banefulness of this treatment, in a manner that could not be refuted. Dr. Habershon and the late Dr. Tanner (a pupil of Todd's) followed with valuable publications in the same direction; and now, I suppose all our leading physicians and surgeons are unanimous on the subject. Sir Thomas Watson himself has lived to acknowledge its soundness likewise. How is it, then, that some men still adhere to this old-fashioned and injurious practice? Four-and-twenty years ago, on account of a deep-seated affection of the eye, caused by overuse of books and microscope, I was treated by a famous oculist (Mr. Dalrymple) with a prolonged course of mercury, which seemed to render my eye worse instead of better, and certainly grievously impaired my general health. Consequently, I became a ready disciple of Bennett and Todd, and ever since that time I have entirely abandoned the use of mercury in all inflammatory disorders, whatsoever organs might be affected; and, I may add, with an immensely more satisfactory result than previously. The cure of the disease has been surer and quicker, and the dreadful *anæmia* and prolonged debility, consequent on a long mercurial course, have been avoided. So recently as in the penultimate number of the *British Medical Journal*, a gentleman narrates a case of general paralysis in a man, consequent on an injury to the head, which he says he 'treated with mercury until the system was affected.' On what grounds, I cannot understand."

Mortality in Massachusetts.—*Deaths in fifteen Cities for the week ending August* 1, 1874.

Boston, 205; Worcester, 24; Lowell, 31; Chelsea, 7; Cambridge, 40; Lawrence, 15; Springfield, 8; Lynn, 13; Gloucester, 3; Fitchburg, 5; Newburyport, 5; Somerville, 6; Fall River, 36; Haverhill, 9; Holyoke, 12. Total, 419.

Prevalent Diseases.—Cholera infantum, 143; consumption, 48.

Of the largely increased mortality from cholera infantum, Boston reports 87 deaths, and Cambridge reports 10.

F. W. DRAPER, M.D.
Secretary pro tem. of the State Board of Health.

Deaths in Boston for the week ending Saturday, August 8th, 219. Males, 121; females, 98. Accident, 1; abscess, 1; apoplexy, 2; asthma, 1; inflammation of the bowels, 8; bronchitis, 2; inflammation of the brain, 1; disease of the brain, 4; burned, 1; cancer, 4; cerebro-spinal meningitis, 1; cyanosis, 1; cholera infantum, 85; cholera morbus, 6; consumption, 28; convulsions, 2; debility, 4; diarrhœa, 11; dropsy, 1; dropsy of the brain, 2; dysentery, 3; erysipelas, 1; scarlet fever, 1; typhoid fever, 5; disease of the heart, 8; hernia, 1; intemperance, 1; jaundice, 1; disease of the kidneys, 4; disease of the liver, 2; congestion of the lungs, 1; inflammation of the lungs, 9; laryngitis, 1; marasmus, 6; old age, 2; paralysis, 1; spina bifida, 1; tabes mesenterica, 2; thrush, 1; teething, 1; whooping cough, 1.

Under 5 years of age, 135; between 5 and 20 years, 12; between 20 and 40 years, 25; between 40 and 60 years, 21; over 60 years, 26. Born in the United States, 173; Ireland, 30; other places, 16.